

**BEST AVAILABLE COPY****Abstract**

In a method of producing cement clinker and electricity, cement raw mix and hydrocarbon are fed in a circulating fluidized bed boiler (1). Therein cement raw mix is calcined and steam is produced. Gas and solids out of the fluidized bed enter a cyclone (8), the solids being separated therein and returned to the bed. Part of those solids are first cooled down in a solids heat exchanger (9) producing steam. Fly ash consisting predominantly of lime and gas escaping the cyclone are passed through a heat exchanger (28, 33) and a filter (37). Hot bed material is discharged from the circulating fluidized bed and is ground with additives, then blended with lime being separated in the filter (37), then supplied to a rotary kiln (16), wherein the solids are clinkered. The produced steam is fed to a steam turbine island (42).

(Fig.)